

I. Fill in the Blank: Write the correct answer from the word bank

chromosomes	DNA	genes	heredity	traits
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- heredity 1. the passing of traits from parents to offspring
- traits 2. physical characteristics that you inherited from your parents
- genes 3. small sections of DNA that determine many traits
- DNA 4. molecule that carries the chemical code that tells cells what to do
- chromosomes 5. contains DNA

genotype	hybrid	pedigree
phenotype	Punnett Square	purebred

- Punnett Square 6. a chart that shows the genetic possibilities of a certain trait in the offspring of a specific pair of parents
- pedigree 7. a chart that traces a trait through generations of family members
- pure bred 8. plants that show the same trait for many generations when pollinated naturally
- hybrid 9. a plant produced by crossing purebred parent plants that each have different forms of the same trait
- phenotype 10. the physical appearance of an organism
- genotype 11. the arrangement of genes within an organism

II. Short answer:

12. An example of genetic engineering in medicine is using bacteria to produce insulin for diabetics.
13. An example of genetic engineering of plants is adding genes to cause them to taste bad to harmful insects.
14. An example of genetic engineering of animals is adding genes to cause them to grow larger and faster with fewer diseases.

III. True – False: Write “T” for True or “F” for False.

- F 15. All organisms have the same DNA pattern.
- T 16. The shape of a DNA molecule is called a double helix.
- F 17. Watson and Wilkins discovered the structure of DNA.
- T 18. Within the organism, every cell has the same DNA pattern.

IV. Complete the Statement: Circle the correct term

19. (Codominance / Incomplete dominance) occurs when genes for a trait blend together.
20. A (dominant trait / recessive trait) is a characteristic that is shown in the hybrid generation.
21. (Reginald Punnett / Gregor Mendel) experimented with pea plants to study how traits were passed on from generation to generation.
22. In Mendel’s experiments, the P generation refers to purebred (offspring / parent plants).
23. (Genetic engineering / A genetic disease) is not contagious but is inherited as it is passed from parent to child.
24. (Genetic engineering / A genetic disease) involves changing a gene in an organism or moving a gene from one organism to another.